

### IN THE CLAIMS:

Please amend the claims as follows:

Claims 1-17 (Deleted)

Claim 18. (Amended) Process for preparing pentafluoroethane (F125) by fluorinating F123 as obtained by application of a process ~~according to Claim 1~~ comprising placing 1,1,1-trifluoro-2-chloroethane (F133a) in contact with chlorine, said process being performed:

- in the presence of HF;

- under temperature conditions, with a contact time and with Cl<sub>2</sub>/F133a and HF/F133a molar ratios wherein HF substantially does not react with the F133a and the F123 formed, and promotes selectivity towards F123; and

- in the presence of a bulk catalyst consisting of aluminum fluoride or of a mixture of aluminum fluoride and alumina, or of a catalyst based on iron, or on iron and nickel, supported on aluminum fluoride or on a mixture of aluminum fluoride and alumina.

Claim 19. (Amended) Process according to Claim 18, in which the F123 is placed in contact with HF in the presence of a catalyst consisting of aluminum fluoride or of a mixture of ~~aluminium~~ aluminum fluoride and alumina, or of a catalyst based on iron, or on iron and nickel, supported on ~~aluminium~~ aluminum fluoride or on a mixture of ~~aluminium~~ aluminum fluoride and alumina.

Claim 20. (Original) Process according to Claim 18, wherein the starting F133a is obtained by fluorination of trichloroethylene or by fluorination of trichloroethylene is performed in the liquid phase under pressure, in the presence of a catalyst based on antimony salts or in the gaseous phase in the presence of a

catalyst based on chromium oxide or chromium oxyfluoride, said process comprising:

- 1) fluorinating trichloroethylene to F133a,
- 2) chlorinating F133a to F123,
- 3) fluorinating F123 to F125.

Claim 21. (Original) Plant for carrying out the process according to Claim 20, wherein it comprises:

for 1):

- a reactor containing the catalyst;
- inlets for trichloroethylene and HF;
- an HCl distillation column;
- a column for separating out F133a + HF from the heavy

fractions:

for 2):

- a chlorination reactor fed with:
  - F133a and HF;
  - chlorine;
- an HCl separation column;
- a column for separating the crude F123 from the unreacted F133a, especially azeotropic HF and unreacted Cl<sub>2</sub> which are recycled;
- a device to withdraw the excess HF.

for 3):

- a fluorination reactor, fed with crude F123 originating from a column for separating crude F123 from 2), with HF and optionally with crude F124 recycled from a column;
- at the outlet of the fluorination reactor, the devices for processing the reaction gases intended to recover the HCl formed as

byproduct by the reaction and the unconverted HF, and to neutralize the fluorocarbon compounds before distilling them;

- a column for then extracting as the head fraction the F125, the tail fraction then being distilled off on a column to give a mixture F124 + F123 purified of its content of heavy fractions, said mixture then being recycled into the reaction to be fluorinated therein into F125.

Claim 22 (Original) Plant according to Claim 21, wherein it comprises a column for purifying both the crude F123 derived from a column of 2) and the crude mixture F124 + F123 derived from the tail fraction of a column of 3).

Claims 23-26 (Deleted)